



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2014-0570; Directorate Identifier 2013-NM-094-AD]

RIN 2120-AA64

Airworthiness Directives; Bombardier, Inc. Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for certain Bombardier, Inc. Model DHC-8-102, -103, -106, -201, -202, -301, -311, and -315 airplanes. This proposed AD was prompted by fuel system reviews conducted by the manufacturer. This proposed AD would require revising the maintenance or inspection program to incorporate new limitations for fuel tank systems. We are proposing this AD to prevent potential ignition sources within the fuel system, which could result in a fuel tank explosion.

DATES: We must receive comments on this proposed AD by **[INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West

Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Bombardier, Inc., Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; email thd.qseries@aero.bombardier.com; Internet <http://www.bombardier.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0570; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone 800-647-5527) is in the **ADDRESSES** section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Morton Lee, Propulsion Engineer, Propulsion & Services Branch, ANE-173; FAA, New York Aircraft Certification Office, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone 516-228-7355; fax 516-794-5531.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the **ADDRESSES** section. Include “Docket No. FAA-2014-0570; Directorate Identifier 2013-NM-094-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

The FAA has examined the underlying safety issues involved in fuel tank explosions on several large transport airplanes, including the adequacy of existing regulations, the service history of airplanes subject to those regulations, and existing maintenance practices for fuel tank systems. As a result of those findings, we issued a

regulation titled “Transport Airplane Fuel Tank System Design Review, Flammability Reduction and Maintenance and Inspection Requirements” (66 FR 23086, May 7, 2001). In addition to new airworthiness standards for transport airplanes and new maintenance requirements, this rule included Special Federal Aviation Regulation No. 88 (“SFAR 88,” Amendment 21-78, and subsequent Amendments 21-82 and 21-83).

Among other actions, SFAR 88 requires certain type design (i.e., type certificate (TC) and supplemental type certificate (STC)) holders to substantiate that their fuel tank systems can prevent ignition sources in the fuel tanks. This requirement applies to type design holders for large turbine-powered transport airplanes and for subsequent modifications to those airplanes. It requires them to perform design reviews and to develop design changes and maintenance procedures if their designs do not meet the new fuel tank safety standards. As explained in the preamble to the rule, we intended to adopt airworthiness directives to mandate any changes found necessary to address unsafe conditions identified as a result of these reviews.

In evaluating these design reviews, we have established four criteria intended to define the unsafe conditions associated with fuel tank systems that require corrective actions. The percentage of operating time during which fuel tanks are exposed to flammable conditions is one of these criteria. The other three criteria address the failure types under evaluation: single failures, combination of failures, and unacceptable (failure) experience. For all three failure criteria, the evaluations included consideration of previous actions taken that may mitigate the need for further action.

We have determined that the actions identified in this proposed AD are necessary to reduce the potential of ignition sources inside fuel tanks, which, in combination with flammable fuel vapors, could result in fuel tank explosions and consequent loss of the airplane.

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian Airworthiness Directive CF-2007-32R2, dated June 27, 2013 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for certain Bombardier, Inc. Model DHC-8-102, -103, -106, -201, -202, -301, -311, and -315 airplanes. The MCAI states:

Bombardier Aerospace has completed a system safety review of the aeroplanes fuel system against fuel tank safety standards * * *. The identified non-compliances were then assessed * * *, to determine if mandatory corrective action is required.

The assessment showed that supplemental maintenance tasks are required to prevent potential ignition sources within the fuel system, which could result in a fuel tank explosion. Revisions have been made to Part 2 “Airworthiness Limitations List” of the DHC-8 Maintenance Program Manuals to introduce the required maintenance tasks.

Revision 1 of this [Canadian] AD was issued to clarify the phase-in schedule for tasks FSL-02 and FSL-17.

Revision 2 of this [Canadian] AD is issued to correct the effective date of AD CF-2013-07 [http://www.casa.gov.au/scripts/nc.dll?WCMS:OLDASSE T::svPath=/ADFiles/over/dhc-8/,svFileName=CF-2013-07.pdf] referenced in Part III of the Corrective Actions and to clarify the revised phase-in schedules in Part II and Part III of the Corrective Actions.

You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0570.

Relevant Service Information

Bombardier, Inc. has issued the following service information. The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

- Bombardier Temporary Revision AWL-110, dated August 31, 2007, to Part 2, “Airworthiness Limitations,” of Bombardier Dash 8 Series 100 Maintenance Program Manual (MPM), Product Support Manual (PSM) 1-8-7.
- Bombardier Temporary Revision AWL 2-43, dated August 31, 2007, to Part 2, “Airworthiness Limitations,” of Bombardier Dash 8 Series 200 MPM, PSM 1-82-7.
- Bombardier Temporary Revision AWL 3-109, dated August 31, 2007, to Part 2, “Airworthiness Limitations,” of Bombardier Dash 8 Series 300 MPM, PSM 1-83-7.

FAA’s Determination and Requirements of this Proposed AD

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of the same type design.

This proposed AD would require revisions to certain operator maintenance documents to include new actions (e.g., inspections) and/or Critical Design Configuration

Control Limitations (CDCCLs). Compliance with these actions and/or CDCCLs is required by 14 CFR 91.403(c). For airplanes that have been previously modified, altered, or repaired in the areas addressed by this proposed AD, the operator may not be able to accomplish the actions described in the revisions. In this situation, to comply with 14 CFR 91.403(c), the operator must request approval for an alternative method of compliance according to paragraph (j)(1) of this proposed AD. The request should include a description of changes to the required inspections that will ensure the continued operational safety of the airplane.

Contacting the Manufacturer” Paragraph in this Proposed AD

Since late 2006, we have included a standard paragraph titled “Airworthy Product” in all MCAI ADs in which the FAA develops an AD based on a foreign authority’s AD.

The MCAI or referenced service information in an FAA AD often directs the owner/operator to contact the manufacturer for corrective actions, such as a repair. Briefly, the Airworthy Product paragraph allowed owners/operators to use corrective actions provided by the manufacturer if those actions were FAA-approved. In addition, the paragraph stated that any actions approved by the State of Design Authority (or its delegated agent) are considered to be FAA-approved.

In an NPRM having Directorate Identifier 2012-NM-101-AD (78 FR 78285, December 26, 2013), we proposed to prevent the use of repairs that were not specifically developed to correct the unsafe condition, by requiring that the repair approval provided by the State of Design Authority or its delegated agent specifically refer to the FAA AD.

This change was intended to clarify the method of compliance and to provide operators with better visibility of repairs that are specifically developed and approved to correct the unsafe condition. In addition, we proposed to change the phrase “its delegated agent” to include a design approval holder (DAH) with State of Design Authority design organization approval (DOA), as applicable, to refer to a DAH authorized to approve required repairs for the proposed AD.

One commenter to the NPRM having Directorate Identifier 2012-NM-101-AD (78 FR 78285, December 26, 2013) stated the following: “The proposed wording, being specific to repairs, eliminates the interpretation that Airbus messages are acceptable for approving minor deviations (corrective actions) needed during accomplishment of an AD mandated Airbus service bulletin.”

This comment has made the FAA aware that some operators have misunderstood or misinterpreted the Airworthy Product paragraph to allow the owner/operator to use messages provided by the manufacturer as approval of deviations during the accomplishment of an AD-mandated action. The Airworthy Product paragraph does not approve messages or other information provided by the manufacturer for deviations to the requirements of the AD-mandated actions. The Airworthy Product paragraph only addresses the requirement to contact the manufacturer for corrective actions for the identified unsafe condition and does not cover deviations from other AD requirements. However, deviations to AD-required actions are addressed in 14 CFR 39.17, and anyone may request the approval for an alternative method of compliance to the AD-required actions using the procedures found in 14 CFR 39.19.

To address this misunderstanding and misinterpretation of the Airworthy Product paragraph, we have changed the paragraph and retitled it “Contacting the Manufacturer.” This paragraph now clarifies that for any requirement in this proposed AD to obtain corrective actions from a manufacturer, the actions must be accomplished using a method approved by the FAA, or Transport Canada Civil Aviation (TCCA), or Bombardier, Inc.’s TCCA Design Approval Organization (DAO).

The Contacting the Manufacturer paragraph also clarifies that, if approved by the DAO, the approval must include the DAO-authorized signature. The DAO signature indicates that the data and information contained in the document are TCCA-approved, which is also FAA-approved. Messages and other information provided by the manufacturer that do not contain the DAO-authorized signature approval are not TCCA-approved, unless TCCA directly approves the manufacturer’s message or other information.

This clarification does not remove flexibility previously afforded by the Airworthy Product paragraph. Consistent with long-standing FAA policy, such flexibility was never intended for required actions. This is also consistent with the recommendation of the Airworthiness Directive Implementation Aviation Rulemaking Committee to increase flexibility in complying with ADs by identifying those actions in manufacturers’ service instructions that are “Required for Compliance” with ADs. We continue to work with manufacturers to implement this recommendation. But once we determine that an action is required, any deviation from the requirement must be approved as an alternative method of compliance.

Costs of Compliance

We estimate that this proposed AD affects 122 airplanes of U.S. registry.

We also estimate that it would take about 1 work-hour per product to comply with the basic requirements of this proposed AD. The average labor rate is \$85 per work-hour. Based on these figures, we estimate the cost of this proposed AD on U.S. operators to be \$10,370, or \$85 per product.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This proposed regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States,

or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

Bombardier, Inc.: Docket No. FAA-2014-0570; Directorate Identifier 2013-NM-094-AD.

(a) Comments Due Date

We must receive comments by **[INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

(b) Affected ADs

This AD affects AD 2008-13-09, Amendment 39-15572 (73 FR 47029, August 13, 2008).

(c) Applicability

This AD applies to Bombardier, Inc. Model DHC-8-102, -103, -106, -201, -202, -301, -311, and -315 airplanes, certificated in any category, serial numbers (S/N) 003 through 624 inclusive, and 626.

(d) Subject

Air Transport Association (ATA) of America Code 28, Fuel.

(e) Reason

This AD was prompted by fuel system reviews conducted by the manufacturer. We are issuing this AD to prevent potential ignition sources within the fuel system, which could result in a fuel tank explosion.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Maintenance or Inspection Program Revision

Within 30 days after the effective date of this AD, revise the maintenance or inspection program, as applicable, to include fuel system limitation (FSL) Task Numbers FSL-02 and FSL-17, as specified in the applicable temporary revision (TR) identified in

paragraph (g)(1), (g)(2), or (g)(3) of this AD. The initial compliance times for accomplishing the tasks are specified in paragraphs (h)(1), (h)(2), and (h)(3) of this AD. Doing this revision terminates the requirements of paragraph (f) of AD 2008-13-09, Amendment 39-15572 (73 FR 47029, August 13, 2008), for Task Numbers FSL-02 and FSL-17 only.

(1) Bombardier TR AWL-110, dated August 31, 2007, to Part 2, “Airworthiness Limitations,” of Bombardier Dash 8 Series 100 Maintenance Program Manual (MPM), Product Support Manual (PSM) 1-8-7.

(2) Bombardier TR AWL 2-43, dated August 31, 2007, to Part 2, “Airworthiness Limitations,” of Bombardier Dash 8 Series 200 MPM, PSM 1-82-7.

(3) Bombardier TR AWL 3-109, dated August 31, 2007, to Part 2, “Airworthiness Limitations,” of Bombardier Dash 8 Series 300 MPM, PSM 1-83-7.

(h) Phase-in Compliance Times

For airplanes having S/Ns 003 through 624, and S/N 626, the initial compliance times are specified in paragraphs (h)(1), (h)(2), and (h)(3) of this AD, as applicable.

(1) For airplanes having S/Ns 003 through 624 on which the applicable modification summaries (ModSums) specified in paragraphs (h)(1)(i), (h)(1)(ii), and (h)(1)(iii) of this AD have been incorporated before the effective date of this AD: The compliance time for the initial inspection in FSL Task Number FSL-02 and the initial functional check in FSL Task Number FSL-17 is within 6,000 flight hours or 36 months after the effective date of this AD, whichever occurs first. Airplane configurations can be

a combination of the configurations specified in paragraphs (h)(1)(i), (h)(1)(ii), and (h)(1)(iii) of this AD.

(i) For airplanes having S/Ns 003 through 624: Bombardier ModSum Package 8Q101512, Revision G, dated June 10, 2009; and Bombardier ModSum Package 8Q101865, Revision B, dated May 26, 2008.

(ii) For airplanes having S/Ns 003 through 624 with auxiliary power unit (APU) option: Bombardier ModSum Package 8Q902144, Revision E, dated June 17, 2009.

(iii) For airplanes having S/Ns 003 through 624 with a long-range fuel system installed: Bombardier ModSum Package 8Q902091, Revision C, dated December 22, 2006.

(2) For airplanes having S/Ns 003 through 624 on which the applicable ModSum packages specified in paragraphs (h)(1)(i), (h)(1)(ii), and (h)(1)(iii) of this AD have not been incorporated before the effective date of this AD: The compliance time for the initial inspection in FSL Task Number FSL-02 and the initial functional check in FSL Task Number FSL-17 is before further flight after incorporation of all applicable ModSum packages specified in paragraphs (h)(1)(i), (h)(1)(ii), and (h)(1)(iii) of this AD. Airplane configurations can be a combination of the configurations specified in paragraphs (h)(1)(i), (h)(1)(ii), and (h)(1)(iii) of this AD.

(3) For the airplane having serial number 626: The initial compliance time is at the applicable time specified in paragraph (h)(3)(i) or (h)(3)(ii) of this AD.

(i) If Bombardier ModSum Package 8Q902091, Revision C, dated December 22, 2006, has been incorporated before the effective date of this AD: The compliance time

for doing the initial inspection specified in FSL Task Number FSL-02 and the initial functional check specified in FSL Task Number FSL-17 is within 6,000 flight hours or within 36 months after the effective date of this AD, whichever occurs first.

(ii) If Bombardier ModSum Package 8Q902091 Revision C, dated December 22, 2006, has not been incorporated before the effective date of this AD: The compliance time for doing the initial inspection in FSL Task Number FSL-02 and the initial functional check in FSL Task Number FSL-17 is before further flight after incorporation of Bombardier ModSum Package 8Q901091.

(i) No Alternative Actions, Intervals, and/or Critical Design Configuration Control Limitations (CDCCLs)

After accomplishing the revision required by paragraph (g) of this AD, no alternative actions (e.g., inspections), intervals, and/or CDCCLs may be used unless the actions, intervals, and/or CDCCLs are approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (j) of this AD.

(j) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, New York Aircraft Certification Office (ACO), ANE-170, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the ACO, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590;

telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

(2) Contacting the Manufacturer: For any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or Transport Canada Civil Aviation (TCCA), or Bombardier, Inc.'s TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

(k) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian Airworthiness Directive CF-2007-32R2, dated June 27, 2013, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0570.

(2) For service information identified in this AD, contact Bombardier, Inc., Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; email thd.qseries@aero.bombardier.com; Internet <http://www.bombardier.com>. You may view this service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on August 7, 2014.

Victor Wicklund,
Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

BILLING CODE 4910-13-P

[FR Doc. 2014-19552 Filed 08/15/2014 at 8:45 am; Publication Date: 08/18/2014]